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Peter P. Goché

Iowa State University, goche@iastate.edu

Ziad Qureshi

University of Houston

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Rural Post-Industrial Landscapes: The Perceptual Practice of the Generative Site Plan

Peter P. Goché, *Iowa State University*

Ziad Qureshi, *The University of Houston*



Fig 1. Rockford Brick & Tile Company Landscape circa 1950 (Image: Floyd County Conservation)

Introduction

This presentation will discuss the generative role of the site plan in the interdisciplinary consideration of the post-industrial landscape as a constructed, cultural artifact. During their investigations, design students at Iowa State University addressed the perceptual aspects and unique strategies of situation and location, through the particular lens of the iterative site plan drawing. As an introduction to dealing with these issues of “site,” each effort involved a careful and multi-scalar examination of environmental phenomena and patterns of use and settlement, revealed and affected by the post-industrial architectural artifact.

The rural, post-industrial landscape site represents both a challenge and an opportunity.

Deceptive in its vacuum when addressed only superficially, this site requires careful consideration and understanding. Developing an understanding of the rural site, leading to the execution of a comprehensive design, the investigation seeks a multi-perspectival awareness of a wide variety of conditions, issues, observations, and intuitions.

Active awareness in observation is a valuable tool for design. With this method, observations are not blindly documented, but rather are actively interpreted, through the filter of the human experience of space. In addition to simple, indirect quantitative analysis, the qualitative exploration and subsequent design of the built environment can be seen as a participatory and immersive endeavor, utilizing direct human experience as a cornerstone.

The contemporary landscape is a resource engaged and activated by design. While historical precedents, such as the English Landscape Gardens of the 18th century, sought to use the landscape as a passive background, the full potential of the landscape is in its engagement through activity. By thoughtfully and deeply studying a post-industrial site, through both quantitative research and qualitative experience, it can be activated with a responsive and engaging design - communicated through the generative site plan.

Applying this pedagogical approach, third-year undergraduate architecture students were asked to engage the subject of landscape through two interdisciplinary projects at varied scales. The first was a four-week assignment that required students to analyze and propose a design that encourages active engagement with a post-industrial quarry landscape and historic kilns at The Fossil & Prairie Park Reserve in northern

Iowa. Shifting territories, the second involved an eight-week project in which students were required to work on the conceptualization, research, program and development of a complete design proposal for a post-industrial agricultural site in rural Madison County, Iowa.

Throughout each project, the students were required to produce an iterative series of site plans that, through their continual development, made visible the material and immaterial nature of each site. This presentation will consider the student work of two separate design studios operating concurrently, as a application of the pedagogical approach. The goal is to build on the role site planning has always had in transdisciplinary design thinking, and to participate in the resurgence of experimental methodologies in design education and practice. As the process of design delivery has become almost entirely reliant on digital means, spatial experiments in real time with real people, and real material practices based on direct human experience, are a crucial counterpoint for beginning design students.

Project One - "Intervening: The Anti-Envelope" - Summary

The Fossil & Prairie Park Preserve, located near Rockford in northern IA (approx. N 43.04858 and W -92.97103), constituted the unique site for Project One. Originally a blue shale clay quarry and tile manufacturing plant of the Rockford Brick & Tile company, its industrial products were used for masonry and drainage tile used in agricultural practices throughout rural Iowa. While the majority of the plant's architecture is no longer existent, the contemporary recreational landscape is now home to four remaining original beehive-form kilns, as well as the clay quarries which are now harvested by recreational park visitors for *Devonian* age fossils. Site remediation via a prairie restoration is ongoing, as well as a stabilization and preservation project for the kiln structures. The adaptive-reuse of the kilns themselves were the locus of student design ideas and interventions, mobilized via integrated site planning.

The assignment entailed the development a provocative site plan and design proposal based on a set of spatial aspects specific to an existing environmental context. Using their site plan as generator, students were to develop a design proposal for the re-

occupation of the existing kiln's interior and exterior space using anthro-specific logic as spatial conditioner.



Fig. 2 Site Visit to the Historic Kilns, Rockford IA (Photo by Authors)

Project Two - "Regeneration: Designing the Healing Landscape" - Summary

The Project Two site is located near St. Charles, Madison County, IA (approx 41.302778, -93.891667). This agricultural and is located on the east side of a gravel road identified as G6R (Settlers Trail) just north of highway G50. The 40 acre tract of land currently consists of 15 acres of row crop and 25 acres of highly figured pastureland and forest. The acreage is currently occupied by archaeological remnants which demonstrate its productive heritage, inclusive of a corn drying bin, a 19th-century storm cellar ruin, and several birdhouses. Additionally, the present condition and occupation of the site was investigated, inclusive of an active apiary and recreational uses.

The concept of nature as a healer is timeless. The belief in the power of natural environments to heal their participants has a long history, inclusive of many significant design precedents. Early in his career, John Ruskin wrote in 1838 of his belief in the need for a sympathetic relationship between architecture to nature, as a

means of cultivating human life. ⁱⁱⁱ From the influential Garden Cities of Ebenezer Howard to the contemporary urban parks of James Corner Field Operations, designed natural environments have been consistently deployed as a means of healing and mitigation. In the minds of designers, "natural" landscapes have provided a noted, and often tense, contrast to urban environments.

This eight-week project explored the regenerative and recuperative qualities of the rural landscape, providing a responsively designed environment to "heal the healers themselves" - a regenerative retreat for members of the medical community of Des Moines, Iowa located 30 mile to the north. In particular, the project utilized skills in site analysis, critical thinking, personal experience, and research to enable a proposal for a comprehensively-approached design in the rural landscape of Madison County, IA. Inclusive of a studio site visit, both qualitative and quantitative understandings of the site were established and clearly communicated through documentation and visualizations - anchored by the ongoing endeavor of the communicative site plan. Building upon this foundational research and understanding, students were asked to conceptualize, program, and develop their comprehensive design in the activated landscape.



Fig. 3. Aerial Photo: Project 2 Site, Madison Co., IA (Image: Google Inc.)

As exemplars of the qualitative/quantitative exploration and pedagogical approach pursued in this

endeavor, two award-winning student design projects from Project 2 are detailed:

"Symbiotic Reconstruction" by Matthew Darmour-Paul, 2012

"Symbiotic Reconstruction: the Permacultural Center of Madison County" aims to design spaces for the mental and physical restoration of the Des Moines Medical community via a variety of design strategies responsive to both site and human experience. From the human perspective, the project proposes that contemporary medical practice consists of highly specialized fields of health analysis, which fragments the medical body and causes myopic views of a collective. Responsive to this condition, the design intends to provide spatial opportunities for varied levels of *integration* of the Center's community, inclusive of both medical professionals of various backgrounds and the wider Madison County population. Participation in communal activities, particularly educational collaborative workshops and active site reconstruction and cultivation projects, in combination with individual retreat apply strategies of mental/physical/and spiritual rehabilitation while immersed in the landscape.

The conditions of the rural Madison County site were perceived as a series of conflicting zones, where natural landscape maturation meets the rigid geometries of a mechanized corn field, creating visual and ecological dissonance. *"Symbiotic Reconstruction"* attempts to realign the goals of a divided medical community with a growing but subdued rural ecosystem via their active participation. A variety of programmed spaces embed and grow from a primary site wide circulation spine, activating a reconstructive and symbiotic edge between the subjugated and maturing landscape. The healing of the post-industrial rural landscape and its human occupants is pursued concurrently, in a symbiotic relationship.

This project was awarded the 2012 Hansen Prize Scholarship juried by David Leatherbarrow (Professor and Chair of the Graduate Group in Architecture, University of Pennsylvania School of Design) Ann Sobiach-Munson (Project Architect, Substance Architecture) and Brett Douglas (Principal, Genus Landscape Architects).

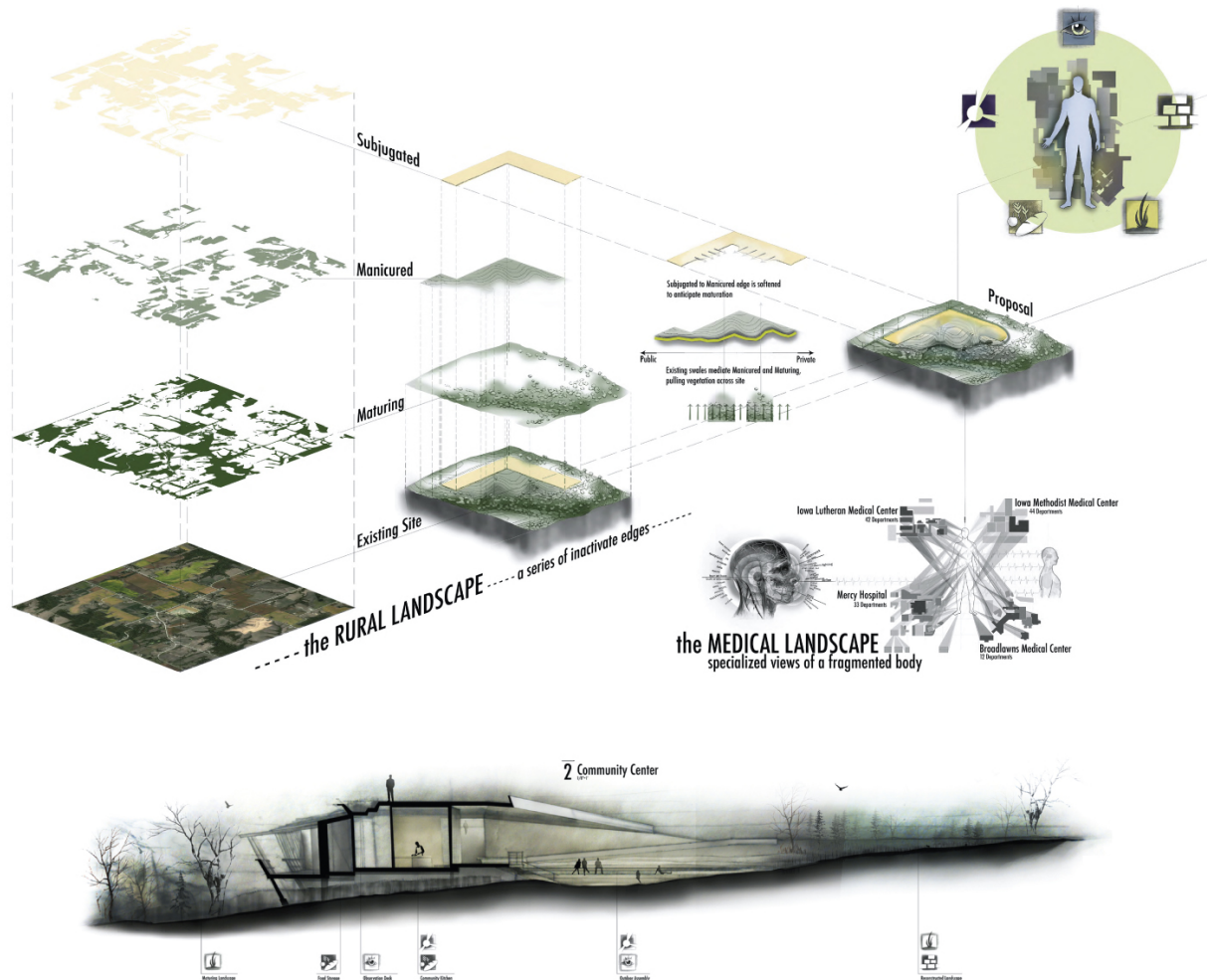


Fig. 4 - "Symbiotic Reconstruction" by Matthew Darmour-Paul - Project Diagrams, Site Plans, and Partial Section

"Amalgamations" by William Pigeon, 2013

Amalgamating light and wind with interest in spatial merging and lack of distinction, the landscape is developed through a blending of spatial phenomenon. Sunflowers replace the existing production crop to remove the practice of using pesticides and chemicals in which contaminate the soil and water, while also providing a more positive threshold. They serve as a resource for the bee colony on site, engage meditation and spatial procession, privacy from the road, and can be harvested for profit. Rows of sunflowers emerge from the sites contours fading away into the lands native prairie grass. Upon arrival a tunnel of sunflowers frames the

tree line through the dining space. This experience of curiosity introduces guests to the landscape and invites them to proceed. The building serves as a spatial procession. It is a threshold through which you move further into the landscape, binding one experience to the other. Moving through the building threshold connects the meditative human experience within the site. After parking, the guests enter their overnight room and curiosity becomes connected to the experience beyond the building into the gardens, woodlands, and waterways, which cannot be seen upon arriving. The landscapes terraced gardens provide a form of meditation through visual observation and herbal consumption. The terraces house flowers and herbs, following the

landscapes natural curve allowing the garden to blend into the landscape. The building engages this meditative human experience. The dining space adapts eating as a communal experience of meditation through dining and socializing. Guests have the ability to pick herbs from the gardens and bring them to the on site chef who then prepares them with a meal of ones choice. Overall, it is regenerative through developing a production-based landscape into an interactive meditative human experience.

This project was awarded the 2013 Hansen Prize Scholarship juried by Reinier de Graaf (Partner, Office of Metropolitan Architecture), Deborah Hauptmann (Professor and Chair, Department of Architecture, Iowa State University) and Jason Alread (Professor and Director of the School of Architecture, University of Florida).



Fig. 5. "Amalgamations" by William Pigeon - with Reinier de Graaf, Deborah Hauptmann and Jason Alread (Photo by Authors)

Conclusion

To generate awareness of how visual thinking evolves, students were encouraged to use multiple forms of media as tools for visual expression, driven by the iterative site plan. By employing various exploratory techniques, a conceptual generator based on each student's experiential comprehension of the landscape and corresponding spatial configurations was

developed and informed the trajectory of each effort. The culminating effort resulted in a body of work that expresses the meaning of place and the relationship between *a people* and the topographic and phenomenological nature of the latent site. Our coursework sought to establish individual methodologies for synthesizing the criterion with which to reconstruct a regenerative landscape and architecture that deepens the relationship between *a people* and its local

grounds. In so doing, each student came to recognize an existing socio-geographic configuration that is host to a sensation of something vast and deep and boundless – a condition that is present in the unconscious but not consciously expressed.

Our intent in conducting this inquiry was to attenuate our thinking about the complexities and intricacies of the inherited post-industrial and rural landscape of Iowa through a case study that allowed for varying perspectives by students from a diverse array of social and geographic backgrounds. The case study served a number of functions, but we suspect its most important may well have been to provide structured trajectory by which to engage the space of Iowa and seek out at-grade knowledge by initiating the creative sequence through a series of occupations that resulted in a closely observed criteria with which to map its value. We continue to reflect on the project's real significance specific to the student's education, but we recognize that its greatest function may well have been the engagement of our beginning design students with the topographic conditions of rural Iowa as a driver for responsive design. To this end, the act of producing such inquiries of space serves as agent in the transdisciplinary cultivation of a specific architectural way of thinking.

Notes:

ⁱ Walpole, Horace. "The Modern Taste in Gardening: Lancelot Capability Brown" in *Anecdotes of Painting in England Volume 4* (1771). Canton: Kirgate Press, 1904.

ⁱⁱ "Rockford Brick & Tile Co." Fossil Prairie & Park Reserve, Floyd County Conservation, accessed 16 January 2015. <http://www.fossilcenter.com/B&T2.html>

ⁱⁱⁱ Ruskin, John. "The Poetry of Architecture." *The Architectural Magazine*, September 1837-December 1838.